

## PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:  
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PCT

## WRITTEN OPINION

(PCT Rule 66)

*Deadline = 12/27/03*

27 OCT 2003

Applicant's or agent's file reference		REPLY DUE
P-7182-PC		within 2 months/days from the above date of mailing
International application No.	International filing date (day/month/year)	Priority date (day/month/year)
PCT/US02/38778	05 December 2002 (05.12.2002)	06 December 2001 (06.12.2001)
International Patent Classification (IPC) or both national classification and IPC		
IPC(7): H04N 5/445, 7/16; G06F 3/00, 1300 and US Cl.: 725/58, 142; 386/92		
Applicant		
SCIENTIFIC-ATLANTA, INC.		

1. This written opinion is the first (first, etc.) drawn by this International Preliminary Examining Authority.
2. This opinion contains indications relating to the following items:

- I  Basis of the opinion
- II  Priority
- III  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV  Lack of unity of invention
- V  Reasoned statement under Rule 66.2 (a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI  Certain documents cited
- VII  Certain defects in the international application
- VIII  Certain observations on the international application

3. The applicant is hereby invited to reply to this opinion.

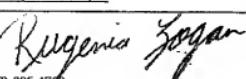
When? See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension. See rule 66.2(d).

How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

Also For an additional opportunity to submit amendments, see Rule 66.4.  
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis.  
For an informal communication with the examiner, see Rule 66.6

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 06 April 2004 (06.04.2004).

Name and mailing address of the IPEA/US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703)305-3230	Authorized officer Andrew Faire Telephone No. (703) 305-4750	
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Form PCT/IPEA/408 (cover sheet)(July 1998)

## WRITTEN OPINION

International application No.

PCT/US02/38778

**I. Basis of the opinion**

1. With regard to the elements of the international application:\*

- the international application as originally filed  
 the description:  
 pages 1-45 \_\_\_\_\_, as originally filed  
 pages NONE \_\_\_\_\_, filed with the demand  
 pages NONE \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- the claims:  
 pages NONE \_\_\_\_\_, as originally filed  
 pages NONE \_\_\_\_\_, as amended (together with any statement) under Article 19  
 pages 46-52 \_\_\_\_\_, filed with the demand  
 pages NONE \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- the drawings:  
 pages 1-26 \_\_\_\_\_, as originally filed  
 pages NONE \_\_\_\_\_, filed with the demand  
 pages NONE \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- the sequence listing part of the description:  
 pages NONE \_\_\_\_\_, as originally filed  
 pages NONE \_\_\_\_\_, filed with the demand  
 pages NONE \_\_\_\_\_, filed with the letter of \_\_\_\_\_

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language which the international application was filed, unless otherwise indicated under this item.  
 These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:
- the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).  
 the language of publication of the international application (under Rule 48.3(b)).  
 the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the written opinion was drawn on the basis of the sequence listing:
- contained in the international application in printed form.  
 filed together with the international application in computer readable form.  
 furnished subsequently to this Authority in written form.  
 furnished subsequently to this Authority in computer readable form.  
 The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.  
 The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4.  The amendments have resulted in the cancellation of:

- the description, pages NONE \_\_\_\_\_  
 the claims, Nos. NONE \_\_\_\_\_  
 the drawings, sheets/fig NONE \_\_\_\_\_

5.  This opinion has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed."

## WRITTEN OPINION

International application No. PCT/US02/38778
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## V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. STATEMENT

Novelty (N)	Claims <u>1-44</u>	YES
	Claims <u>NONE</u>	NO
Inventive Step (IS)	Claims <u>NONE</u>	YES
	Claims <u>1-44</u>	NO
Industrial Applicability (IA)	Claims <u>1-44</u>	YES
	Claims <u>NONE</u>	NO

## 2. CITATIONS AND EXPLANATIONS

Please See Continuation Sheet

**Supplemental Box**  
(To be used when the space in any of the preceding boxes is not sufficient)**TIME LIMIT:**

The time limit set for response to a Written Opinion may not be extended. 37 CFR 1.484(d). Any response received after the expiration of the time limit set in the Written Opinion will not be considered in preparing the International Preliminary Examination Report.

**V. 2. Citations and Explanations:**

Claims 1-44 lack an inventive step under PCT Article 33(3) as being obvious over U.S. Patent 5,371,551 A to Logan et al. in view of U.S. Patent 5,353,121 A to Young et al.

Regarding claims 1-2 and 23-24, Logan teaches a broadcast recording and playback device that concurrently records and plays programming simultaneously. Logan teaches memory for storing logic in order to execute commands of the microprocessor (fig. 1, label 11) (col. 3, ll. 25-33). Logan teaches memory, which is buffer space used for continuously buffering media (abstract). Logan teaches a hard disk for storing the programming (fig. 1, label 7; col. 1, ll. 8-23). Clearly, the system of Logan tracks the size of the content and buffered content in order to manage the buffer (col. 1, ll. 11-16, fig. 1, label 6) thereby preventing buffer underruns and overruns, but is silent on indicating available free space of the hard disk. Young teaches showing the available free space for storing programming (fig. 12, 13, col. 11, ll. 19-25). Therefore, it lacks an inventive step to implement Young in the system of Logan in order to provide the user with information regarding the status of their equipment and to make the system friendlier to the user. The combination of Logan and Young clearly teaches logic for a user interface and responsive to user input.

Regarding claims 3 and 25, Logan is silent on deleting content. The examiner notes that deleting content is well known in the art. Therefore, it lacks an inventive step to delete content from a permanent storage device in order to store additional information.

Regarding claims 4-6 and 26-28, Logan teaches a remote control (fig. 1, label 13), buffer space (fig. 1, label 6), and recording the information to the hard disk (fig. 1, label 7).

Regarding claims 7-9 and 29-31, the combination of Logan and Young teaches available free space and permanent space on a hard disk, but is silent on the buffer space located on a hard disk. Buffer space on a hard disk is well known in the art. Therefore, it lacks an inventive step to use the hard drive as buffers in order to more efficiently manage the storage of the system. Clearly, the permanent space is allocated from the free space on the hard disk and has physical locations on the hard disk.

Regarding claims 10-11, 21, 32-33, and 43, Young teaches time remaining in units of time (fig. 12-13, but is silent on units of hard disk space. Units of hard disk space are well known in the art. Accordingly, it lacks an inventive step to display the remaining disk space in units of the hard drive in order to convey to the user the available space.

Regarding claims 12-13 and 34-35, Logan teaches receiving analog media (fig. 1) at the device (which equates to a communication interface and a consumer electronics device).

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Regarding claims 14-18 and 36-39, Logan teaches receiving digital media (fig. 1) at the device (which equates to a communication interface and from a remote server) (col. 4, ll. 40-56).

Regarding claims 19-20 and 41-42, clearly the system of Logan and Young teaches reducing the available free space to calculate permanent storage. Further, it follows logically, that the system of Logan and Young will increase the permanent storage space recovered when deleting a program.

Regarding claims 22 and 44, Logan teaches a separate buffer (fig. 1, label 6), which is clearly separate from the free space indication, which reads on free space indication is unaffected by writes and deletions to the buffer space.